What is claimed is:

[Claim 1]   1. A method for re-orientating digital images comprising the following steps:

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analyzing an image stored in a computer readable media and
  determining an image re-orientation requirement according to
  an image analysis output;
determining a direction of re-orientation of the image
  according to the re-orientation requirement; and
re-orientating the image according to the determined direction
  of re-orientation.
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[Claim 2]   2. The method of claim 1, wherein the analyzing step includes comparing properties of the image to predefined values and deriving comparison values, determining whether an image analysis process can be omitted according to the comparison values and if so, determining a re-orientation requirement according to the comparison values.

[Claim 3]   3. The method of claim 1, wherein the analyzing step includes an image analysis process to determine an axis weighting potential for a first axis and an axis weighting potential for a second axis, and the re-orientation requirement is determined according to the axis weighting potentials for the first and second axes and a predetermined value.

[Claim 4]   4. The method of claim 3, wherein the first and second axes are mutually perpendicular.

[Claim 5]   5. The method of claim 3, wherein the image analysis process is an image zone analysis process comprising the following steps:

analyzing a plurality of image zones of the image to realize a
 plurality of zone element values;
comparing the zone element values returned from the analyzing
 step to predetermined image element values and determining a
 class probability rating for each image element class of a
 plurality of image element classes for each image zone;
selecting the image element class with the highest class
 probability rating for each image zone;
comparing the highest class probability rating for each image
 zone to a predetermined value and, if the class probability
 ratings are greater than the predetermined value, generating
 a zone potential rating for each image zone according to the
 probability rating for the selected image element class and a
 table of predetermined factors; and
calculating an axis weighting potential for the first axis and
 the second axis of the image from the corresponding zone
 potential ratings.

**[Claim 6]   6. The method of claim 3, wherein the image analysis process is
an image zone analysis process comprising the following steps:**
analyzing a plurality of image zones of the image to realize a
 plurality of zone element values;
comparing the zone element values returned from the analyzing
 step to predetermined image element values and determining a
 class probability rating for each image element class of a
 plurality of image element classes for each image zone;
comparing the class probability ratings for each image zone to
 a predetermined value and, if the class probability ratings
 for each image zone are greater than the predetermined value,
 generating a zone potential rating for each image zone by

multiplying the class probability rating of each image
    element class by corresponding values for each image element
    class stored in a table of predetermined factors and
    selecting the image element class with the highest class
    probability rating; and
  calculating an axis weighting potential for the first axis and
    the second axis of the image from the corresponding zone
    potential ratings.

[Claim 7]   7. The method of claim 3, wherein the image analysis process is a facial feature analysis process comprising the following steps:
  analyzing the image to determine the size and orientation of
    facial features, and to derive a significance value for the
    facial features; and
  comparing the significance value to a predetermined value and,
    if the significance value is greater than the predetermined
    value, calculating a weighting potential for the first axis
    and the second axis of the image according to the size and
    orientation of the facial features.

[Claim 8]   8. The method of claim 3, wherein the image analysis process comprises an image zone analysis process and a facial feature analysis process.

[Claim 9]   9. The method of claim 8, wherein the image analysis process includes comparing an output of one of the processes to a predefined value and deriving a comparison value, and determining whether the other process can be omitted according to the comparison value.

[Claim 10] 10.　　The method of claim 1, wherein in the determining step, the direction of re-orientation of the image is determined by comparing axis weighting potentials of the first and second axes to determine a dominant axis and determining the direction of re-orientation of the image such that the dominant axis will appear in a vertical viewing plane according to the axis weighting potential of the dominant axis.

[Claim 11] 11.　　The method of claim 1, wherein in the analyzing step, the image re-orientation requirement is derived by comparing the outputs of a facial feature analysis process and an image zone analysis process with predetermined values to determine an order of significance for each process, and using axis weighting potential values from a most significant process to determine the image re-orientation requirement.

[Claim 12] 12.　　The method of claim 3, wherein at least a predefined value is an adaptive threshold.

[Claim 13] 13.　　A method for re-orientating digital images comprising the following steps:

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analyzing an image stored in a computer readable media by an
   image analysis process comprising an image zone analysis
   process for determining an axis weighting potential for a
   first axis and an axis weighting potential for a second axis,
   an image re-orientation requirement being determined
   according to the axis weighting potentials for the first and
   second axes, and a predetermined value;
determining a direction of re-orientation of the image according to the
   re-orientation requirement, the direction of re-orientation of the
   image being determined by comparing axis weighting potentials of the
   first and second axes to determine a dominant axis and determining the
   direction of re-orientation of the image such that the dominant axis
   will appear in a vertical viewing plane according to the axis weighting
   potential of the dominant axis; and
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re-orientating the image according to the determined direction
of re-orientation.

[Claim 14] 14. The method of claim 13, wherein the analyzing step includes comparing properties of the image to predefined values and deriving comparison values, determining whether an image analysis process can be omitted according to the comparison values, and if so, determining a re-orientation requirement according to the comparison values.

[Claim 15] 15. The method of claim 13, wherein the first and second axes are mutually perpendicular.

[Claim 16] 16. The method of claim 13, wherein the image zone analysis process comprises the following steps:

analyzing a plurality of image zones of the image to realize a
plurality of zone element values;

comparing the zone element values returned from the analyzing
step to predetermined image element values and determining a
class probability rating for each image element class of a
plurality of image element classes for each image zone;

selecting the image element class with the highest class
probability rating for each image zone;

comparing the highest class probability rating for each image
zone to a predetermined value and, if the class probability
ratings are greater than the predetermined value, generating
a zone potential rating for each image zone according to the
probability rating for the selected image element class and a
table of predetermined factors; and

calculating an axis weighting potential for the first axis and
   the second axis of the image from the corresponding zone
   potential ratings.

[Claim 17] 17.   The method claim 13, wherein the image zone analysis process comprises the following steps:

analyzing a plurality of image zones of the image to realize a
   plurality of zone element values;
comparing the zone element values returned from the analyzing
   step to predetermined image element values and determining a
   class probability rating for each image element class of a
   plurality of image element classes for each image zone;
comparing the class probability ratings for each image zone to
   a predetermined value and, if the class probability ratings
   for each image zone are greater than the predetermined value,
   generating a zone potential rating for each image zone by
   multiplying the class probability rating of each image
   element class by corresponding values for each image element
   class stored in a table of predetermined factors and
   selecting the image element class with the highest class
   probability rating; and
calculating an axis weighting potential for the first axis and
   the second axis of the image from the corresponding zone
   potential ratings.

[Claim 18] 18.   The method of claim 13, wherein the image analysis process further comprises a facial feature analysis process having the following steps:

analyzing the image to determine the size and orientation of
 facial features, and to derive a significance value for the
 facial features; and
comparing the significance value to a predetermined value and,
 if the significance value is greater than the predetermined
 value, calculating a weighting potential for the first axis
 and the second axis of the image according to the size and
 orientation of the facial features.

[Claim 19] 19. The method of claim 18, wherein the image analysis process includes comparing an output of one of the processes to a predefined value and deriving a comparison value, and determining whether the other process can be omitted according to the comparison value.

[Claim 20] 20.   The method of claim 13, wherein in the analyzing step, the image re-orientation requirement is derived by comparing the outputs of a facial feature analysis process and an image zone analysis process with predetermined values to determine an order of significance for each process, and using axis weighting potential values from a most significant process to determine the image re-orientation requirement.